State Research Roundtable C

Outcome Evaluations of Utah's Primary Care Network (PCN)

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Outline

What is PCN?

Outcome Evaluations:

- Part I: Health outcome evaluation of the PCN re-enrollees based on the pre and post self- health assessment surveys
- Part II: Hospital service and pharmacy utilization and cost study based on claims data
- Part III: Disenrollment report based on a disenrollment survey

Lessons Learned

PCN Eligibility

PCN is the first Medicaid 1115 waiver program in the nation to provide publicly-funded primary care coverage with donated hospital and specialty care to those who are:

- Age 19 through 64
- U.S. citizen or legal resident
- With family incomes below 150% of the federal poverty level
- Do not qualify for Medicaid
- Do not have health insurance 6 months prior to PCN
- Do not have access to health insurance, student health insurance, Medicare or Veterans Benefits, or health insurance at work

PCN Coverage

PCN is a fee-for-service program. It covers:

- Primary care provider visits / Some emergency room visits
- Emergency medical transportation
- Lab services / X-rays / Up to four prescriptions per month
- Dental exams, dental X-rays, cleanings, and fillings
- One eye exam per year; no glasses
- Family planning methods

Uncovered but Donated Care

PCN covers following types of providers: Family practice, general practice, internal medicine, obstetrics and gynecology, pediatrics, and nurse practitioner.

PCN does not cover specialty physician care or inpatient hospital care.

However, hospitals in Utah have agreed to donate up to $10 million in inpatient care financial charges to pre-authorized PCN patients.

PCN case managers work with community-based voluntary specialty physician networks to connect clients with needed services.

Enrollment Fees

- For persons with income below 50% of the poverty level: $25 per year
- For persons receiving General Assistance* (starting later this year): $15 per year
- For everyone else: $50 per year

*General assistance is defined as financial assistance provided to a person who is not otherwise eligible for cash assistance under Part 3, Family Employment Program, because that person does not live in a family with a related dependent child.

Co-Payment Schedule

Benefit	Co-Pay Amount * Maximum is $1,000.00 per person/per calendar year
Physician Visit (pregnancy related services not included)	$5 co-pay per visit
Hospital Emergency Room (not all emergencies covered)	$30 co-pay per visit for emergencies
Emergency Transportation	None – limited to emergency transportation
Medical Equipment and Supplies	$10 co-pay for covered services
Pre-existing Condition Waiting Period	No Waiting Period
Pharmacy (four prescriptions per month)	$5 co-pay for prescriptions on preferred list 25% of the allowed not on list
Laboratory	5% co-pay of the allowed amount if over $50
X-rays	5% co-pay of the allowed amount if over $100
Dental Services (exams, cleanings, x-rays and fillings)	10% co-pay of allowed amount
Vision Screening (one exam per year; glasses/contacts not included)	$5 co-pay; one eye exam per year

Part I: Health Outcome Evaluation

This study measures the program's impact on PCN re-enrollees' self-reported health outcomes, self-reported health care utilizations, and the enrollees' satisfaction with the program and providers after 12 months in the program.

Population Studied

- Pre-enrollment assessments were administrated among all those who applied for the PCN program (n=9,984) between July and December 2002.
- Post-enrollment assessments were mailed to a sample of members (n = 3,000) who renewed their PCN membership between July and December 2003.
- Approximately 2,233 respondents completed and returned the post-enrollment assessments. Response rate was 75.7%.
- A total of 1,992 pre- and post-assessment records were successfully matched and included in this study.

Comparison Groups

The PCN population consists of two types of enrollees according to their health insurance coverage prior to enrollment into the PCN program. Separate analyses were conducted for these two groups.

1. Approximately 13 percent (n=256) of the sample is made up of beneficiaries of the former Utah Medical Assistance Program (Former UMAP).

2. The remaining 1,736 PCN respondents did not have health insurance six months before they enrolled into PCN (Non-UMAP).

Study Method

The paired samples are self-health assessment surveys administered to PCN enrollees during pre- and post-PCN enrollment periods.

- The assessment questions were adopted from the SF-12 health status, the Behavior Risk Factor Surveillance System (BRFSS) and the Consumer Assessment of Health Plans Study (CAHPS) surveys.
- Ten health indicators were generated from each survey, serving as measures of health outcome, utilization, and satisfaction.
- Preliminary analyses have been conducted to measure the health indicators before and after 12 months of enrollment in the PCN program.
- Paired sample t-tests were used to discover significant differences between pre and post F-12 health status scores.
- 95% confidence intervals were used to estimate differences between proportions.

PCN Evaluation Framework
Enrollees' Health Outcome and Program Performance Measures

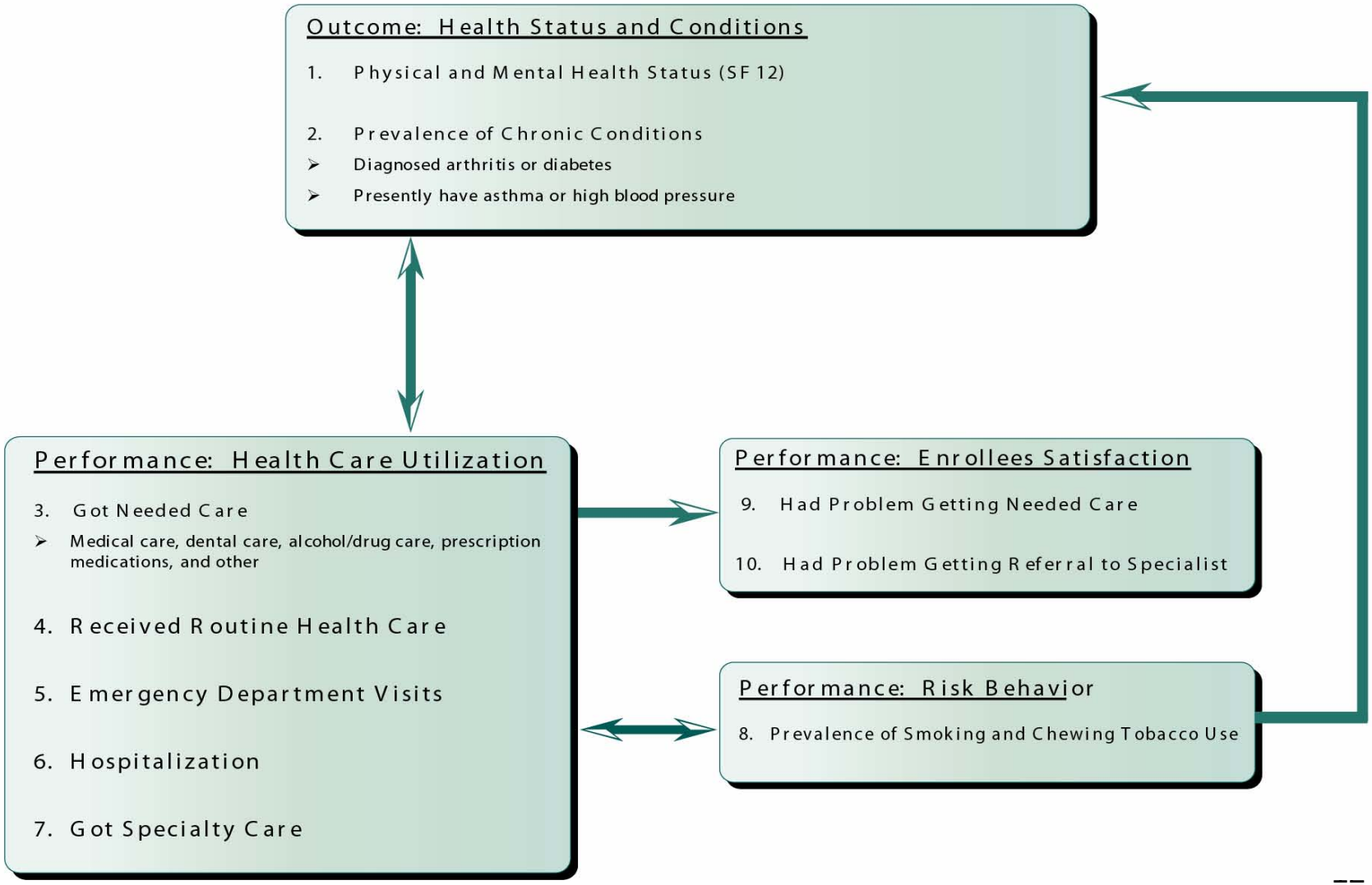
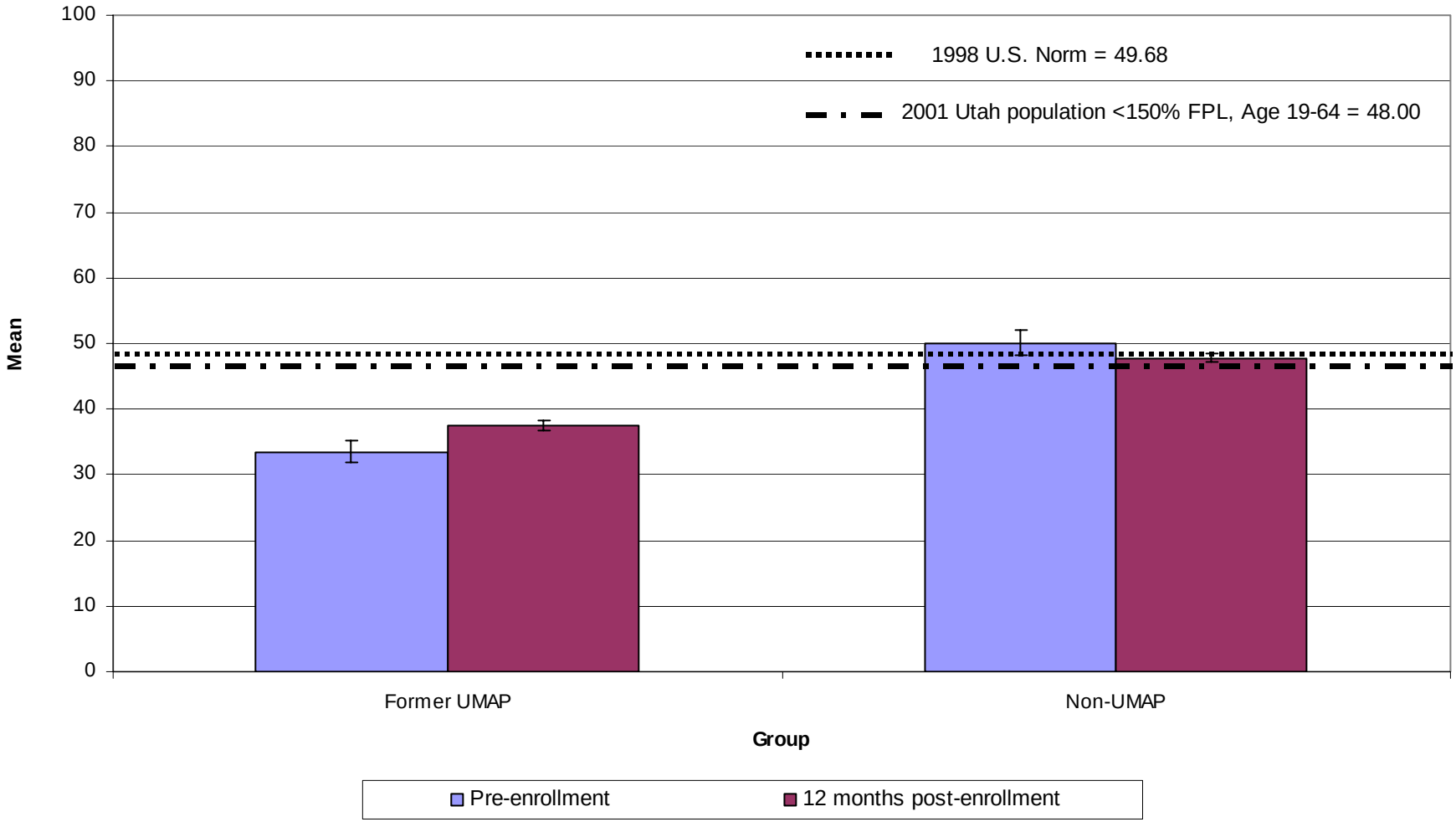


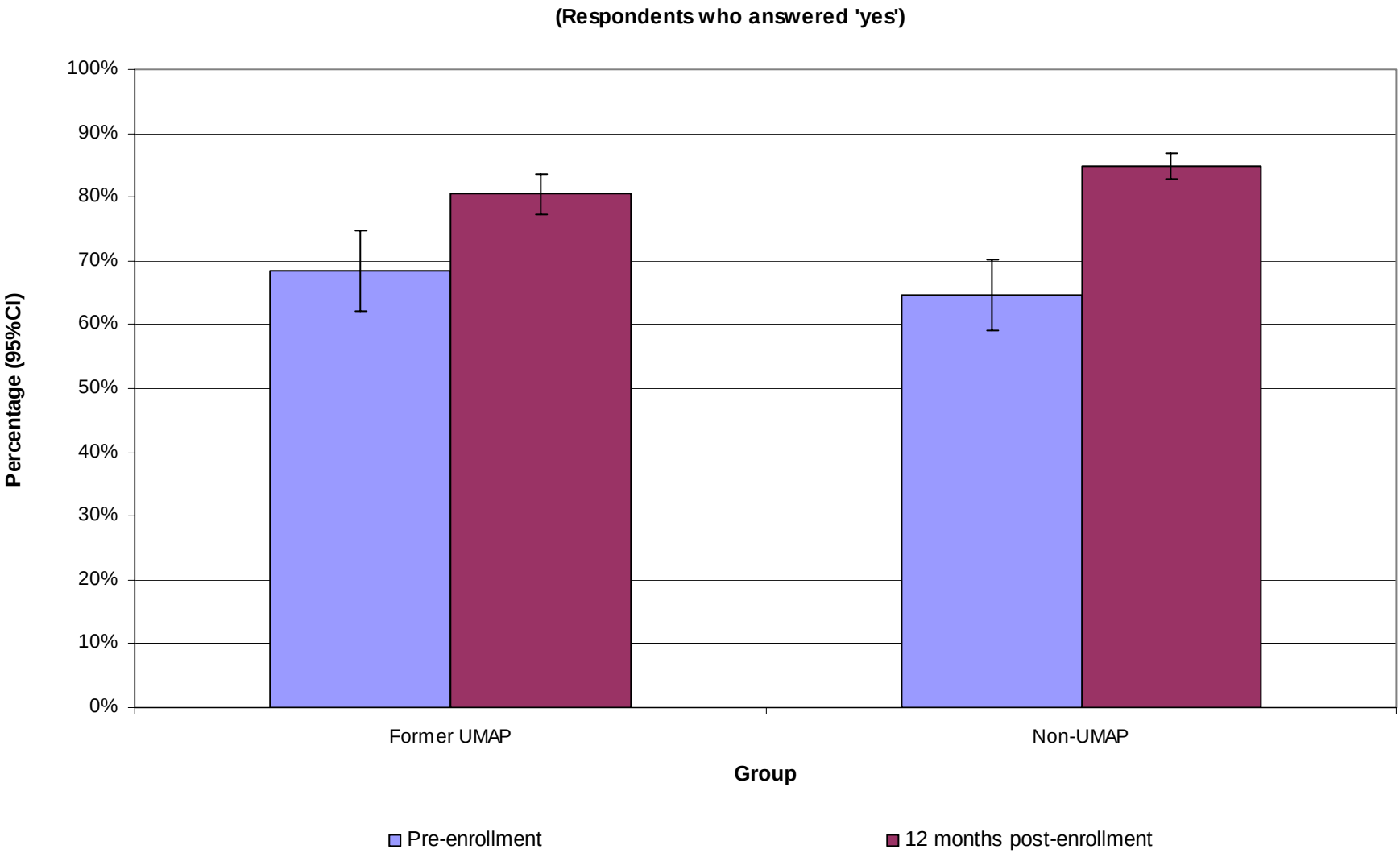
Figure 1. SF-12 Self-Reported Health Status Physical Component Score

(100 indicates the highest level of health)



Minimal change was observed in physical health status of PCN enrollees.

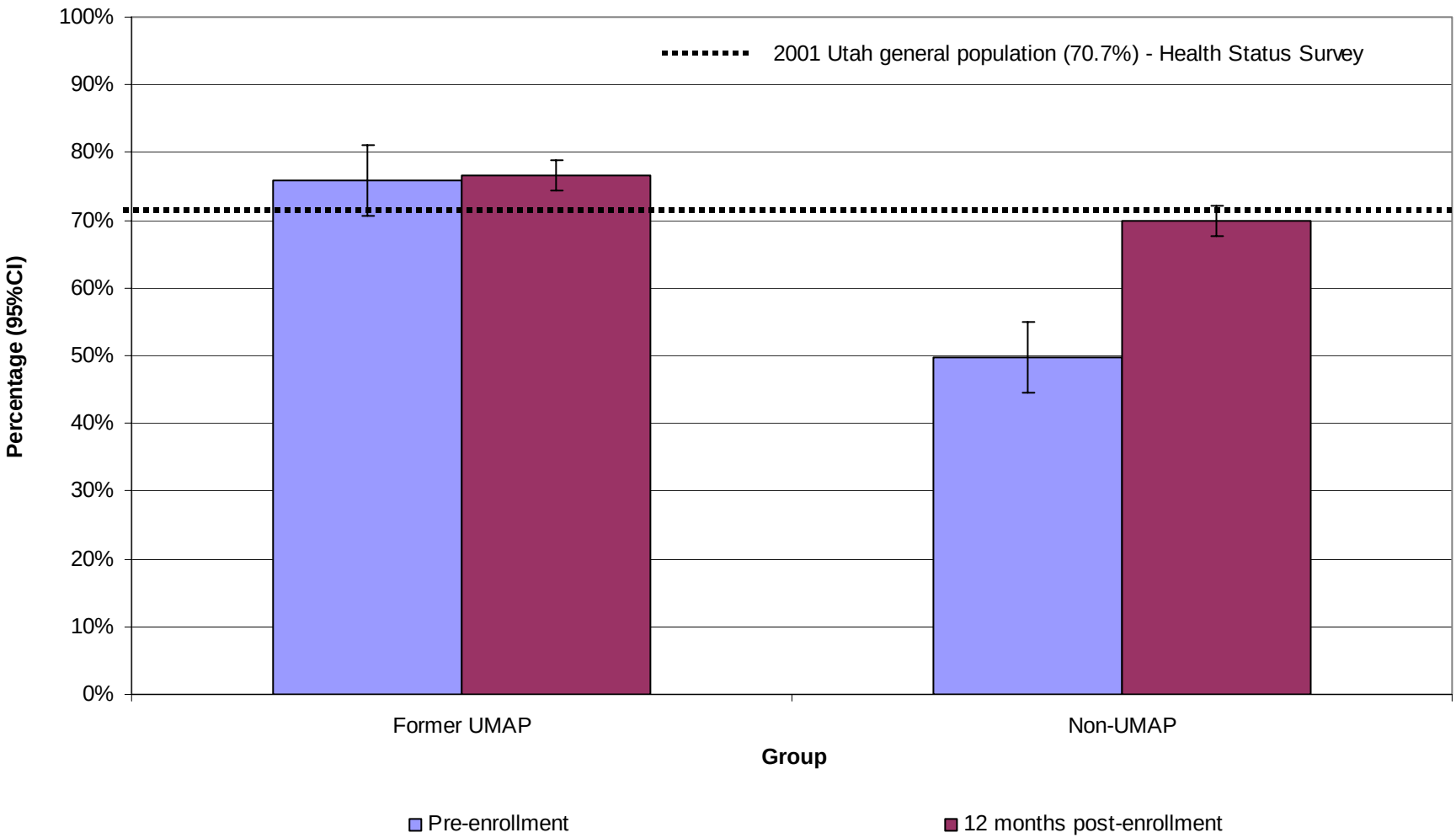
Figure 2. Did You Receive Needed Medical Care in the Past Six Months?



PCN enrollees got more needed care after enrollment into the program.

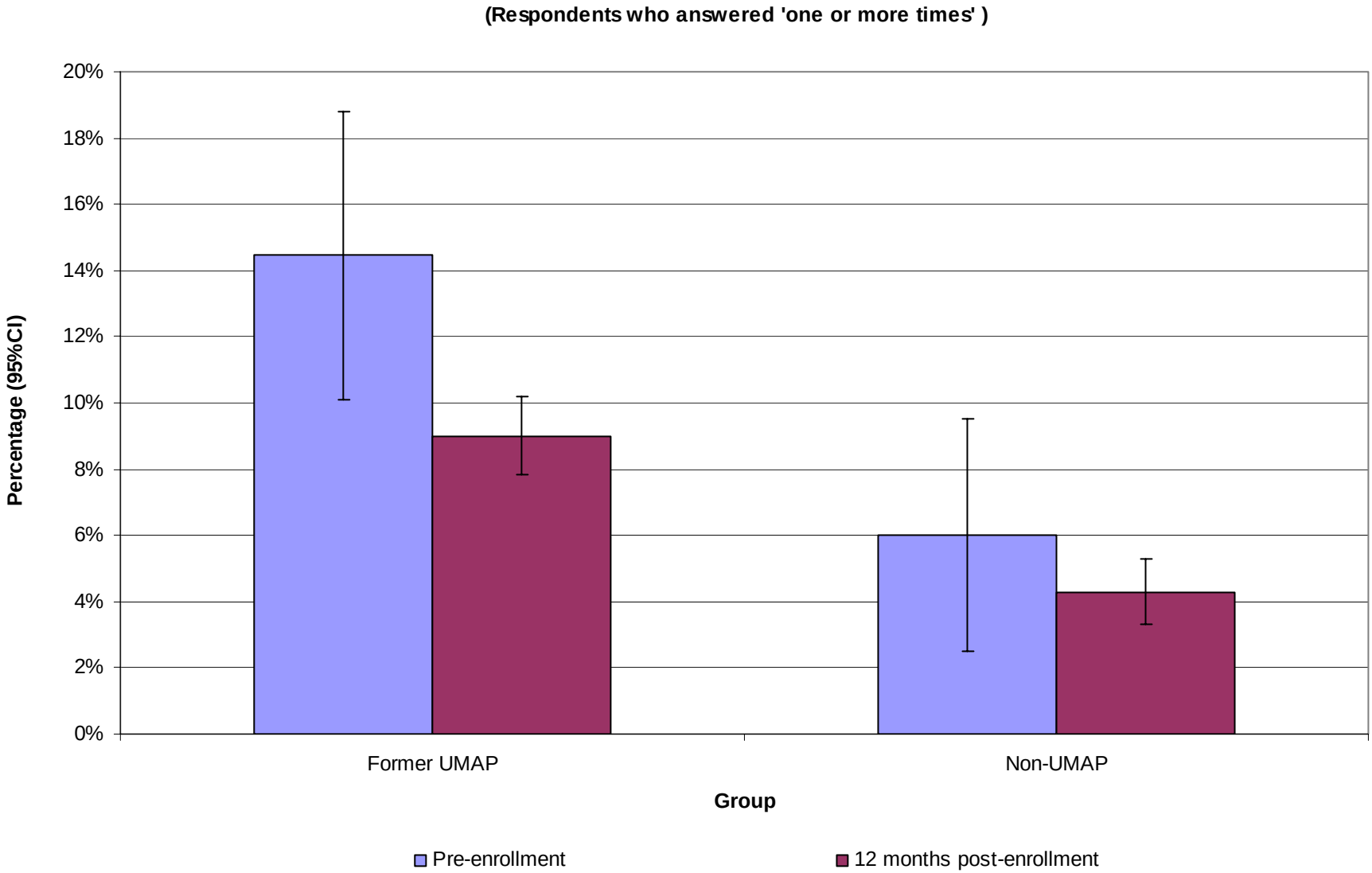
Figure 3. Have You Received Routine Care in the Past Six Months?

(Respondents who answered 'once' 'two-three times' or 'four + times)



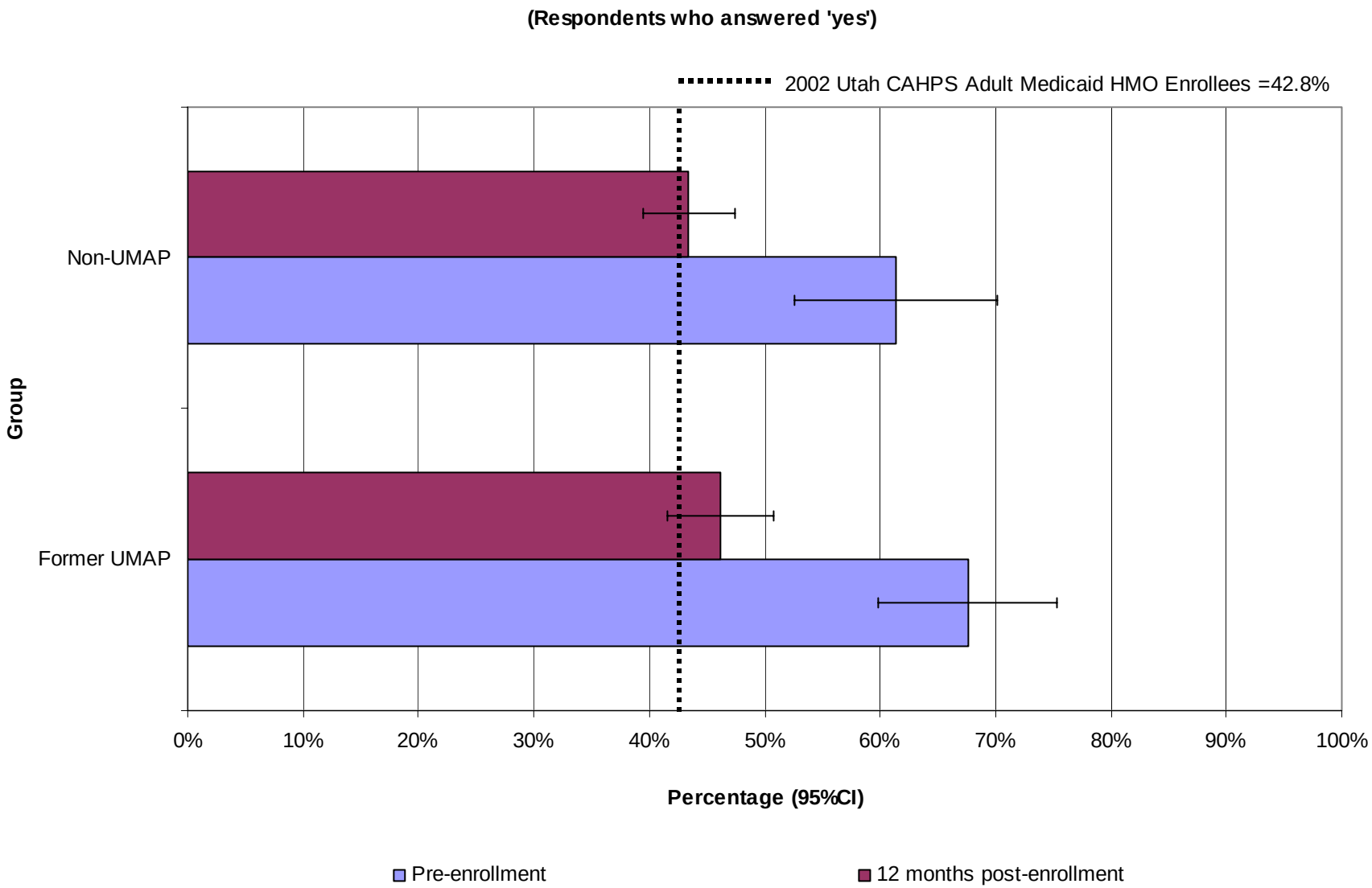
Non-UMAP beneficiaries are more likely to receive routine care after enrollment into the PCN.

Figure 4. How Many Times Have You Stayed Overnight in a Hospital in the Past Six Months?



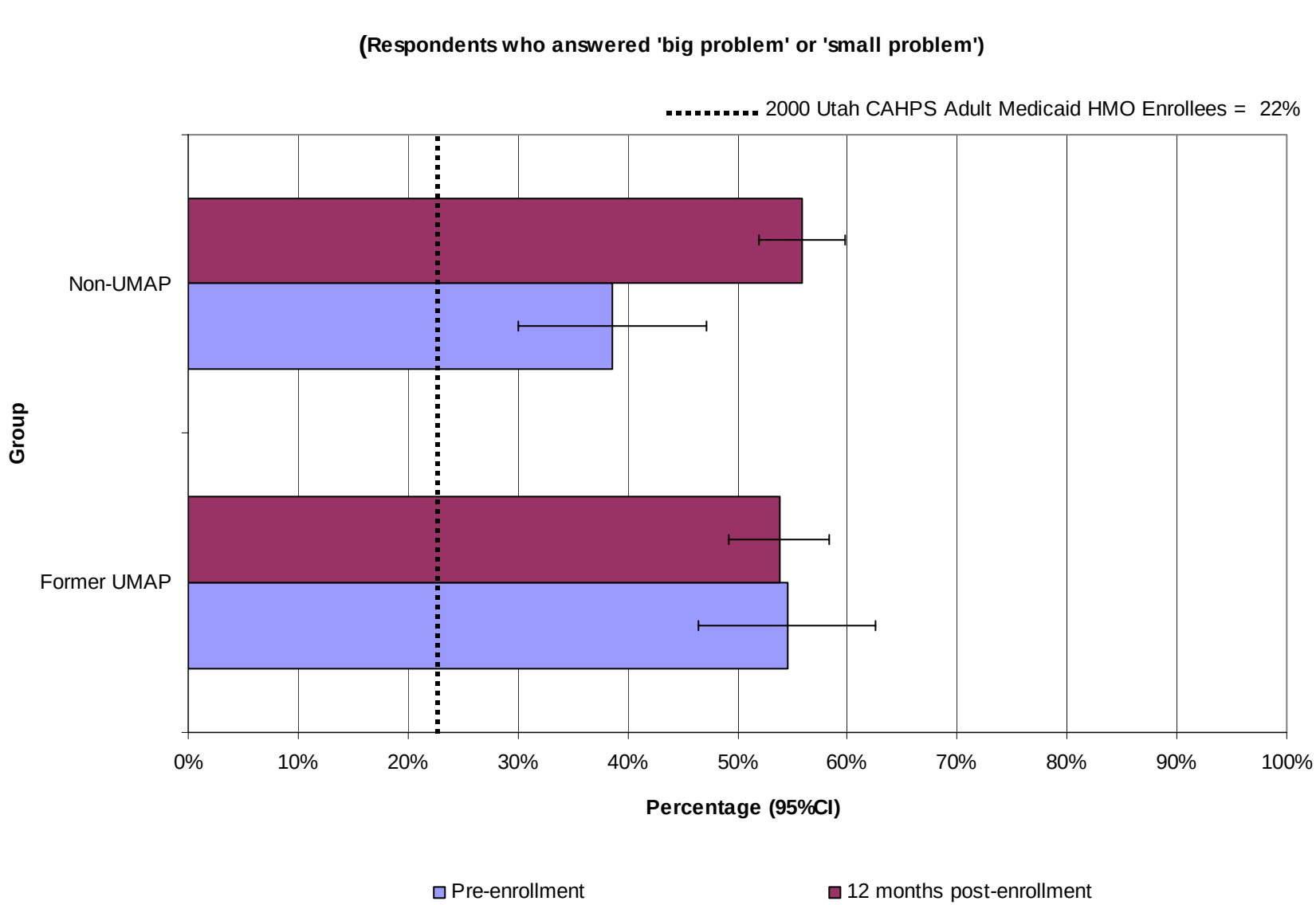
Self-reported inpatient utilizations for both groups declined.

Figure 5. Have You Visited a Specialist In The Past Six Months?



Ability to access specialty care was a major problem for both groups.

Figure 6. In the Past Six Months, Have You Had a Problem Getting Referrals to Specialists?



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PCN Reenrollee's Health Outcome and Performance Measures

Preliminary Findings from the PCN Enrollees' Pre- and Post-Self Health Assessment Surveys
July 1- December 31, 2002 vs. July 1- December 31, 2003

Health Indicator/Measure	Former UMAP n=256 (13%)				Statistically Significant	Non-UMAP n=1,736 (87%)				Statistically Significant
	Pre (numerator)		Post (numerator)			Pre (numerator)		Post (numerator)		
1. Physical and Mental Health Status										
Physical Component Score (SF-12)*	33.54	(253)	37.52	(256)	X	50.12	(1,708)	47.81	(1,724)	X
Mental Component Score (SF-12)*	39.88	(253)	40.05	(256)	n.s.	40.56	(1,708)	40.32	(1,724)	n.s.
2. Chronic Conditions										
Diagnosed Arthritis	37.9%	(97)	39.1%	(100)	n.s.	14.3%	(248)	20.0%	(347)	X
Diagnosed Diabetes	21.1%	(54)	18.8%	(48)	X	8.4%	(145)	10.9%	(189)	n.s.
Presently Have Asthma	18.8%	(48)	16.4%	(42)	X	9.1%	(158)	11.0%	(191)	n.s.
Presently Have High Blood Pressure	35.5%	(91)	29.3%	(75)	X	11.8%	(205)	16.5%	(287)	X
3. Got Needed Care										
Medical care	68.5%	(146)	80.5%	(157)	X	64.6%	(581)	84.8%	(985)	X
Dental Care	43.5%	(54)	55.5%	(66)	n.s.	40.1%	(283)	64.3%	(549)	X
Mental health care	63.8%	(44)	72.7%	(40)	n.s.	58.2%	(107)	56.6%	(116)	n.s.
Alcohol/drug care	45.5%	(5)	70.0%	(7)	X	73.1%	(19)	58.3%	(14)	X
Prescription medications	62.7%	(133)	85.0%	(153)	X	63.1%	(587)	89.1%	(913)	X
4. Received routine care	75.8%	(194)	76.6%	(196)	n.s.	49.7%	(862)	69.9%	(1,213)	X
5. Emergency department visits, at least once	35.9%	(92)	28.1%	(72)	X	15.8%	(274)	18.7%	(324)	n.s.
6. Overnight hospital stays, at least once	14.5%	(37)	9.0%	(23)	X	6.0%	(105)	4.3%	(75)	n.s.
7. Got specialty care	67.6%	(48)	46.2%	(61)	X	61.4%	(266)	43.4%	(262)	X
8. Prevalence of tobacco use	41.8%	(107)	36.3%	(93)	X	24.1%	(418)	32.3%	(195)	X
9. Had problem getting needed care	61.3%	(157)	44.5%	(114)	X	37.8%	(657)	33.3%	(578)	X
10. Had problem getting referral to specialist	54.5%	(79)	53.8%	(71)	n.s.	38.6%	(167)	55.9%	(337)	X
Satisfaction Measures										
Rating of Program (8,9,10=Best)	N/A	N/A	6.31	(247)	N/A	N/A	N/A	6.10	(901)	N/A
Rating of Personal Doctor or Nurse (8,9,10=Best)	N/A	N/A	8.33	(192)	N/A	N/A	N/A	8.54	(1,087)	N/A

* Significant test was done by paired samples t-tests. Other tests were based on 95% confidence intervals.

Additional Findings (not presented in figures)

Former UMAP enrollees showed different patterns in reporting their experiences with PCN from their counterpart group.

- Formerly uninsured PCN members were more likely to be diagnosed with chronic conditions after they enrolled into the PCN.
- Self-reported ED visits for former UMAP clients declined.
- A slight modification of risk behavior (tobacco use) has been observed among a subgroup of PCN enrollees.
- The level of PCN enrollees' satisfaction with their personal doctor or nurse was similar to that of the general Medicaid population in Utah.
- PCN enrollees rated the PCN program lower than general Medicaid enrollees' ratings of the Utah Medicaid program in CAHPS surveys.

Part II: Utilization Patterns & Costs

"*Budget neutrality will be assured under the demonstration. …the State will be at risk for the per capita cost for Medicaid eligibles, but not at risk for the number of eligibles.*

… CMS shall enforce budget neutrality over the life of the demonstration, rather than on an annual basis."

From CMS Special Terms and Conditions for PCN

A. Hospital Services Utilization and Costs

One of the key hypotheses of PCN is

- Access to primary care should reduce acute care or hospital utilization and costs over a certain period.

PCN Utilization Overview

7/1/2002-2/14/2004

- There have been just over 29,000 people enrolled in PCN at one time or another
- PCN has paid claims for 25,553 enrollees (88%)
- 19,931 (78% of clients with paid claims) have received at least one of:
  - Office Visit
  - Treatment in an Emergency Room (ER)
  - Treatment as a Hospital Inpatient

Utilization Rates

- Office Visits

  18,637 have at least one office visit (73%)

  13,435 have two or more office visits (53%)
- Emergency Room

  5,345 have at least one ER visit claim (21%)

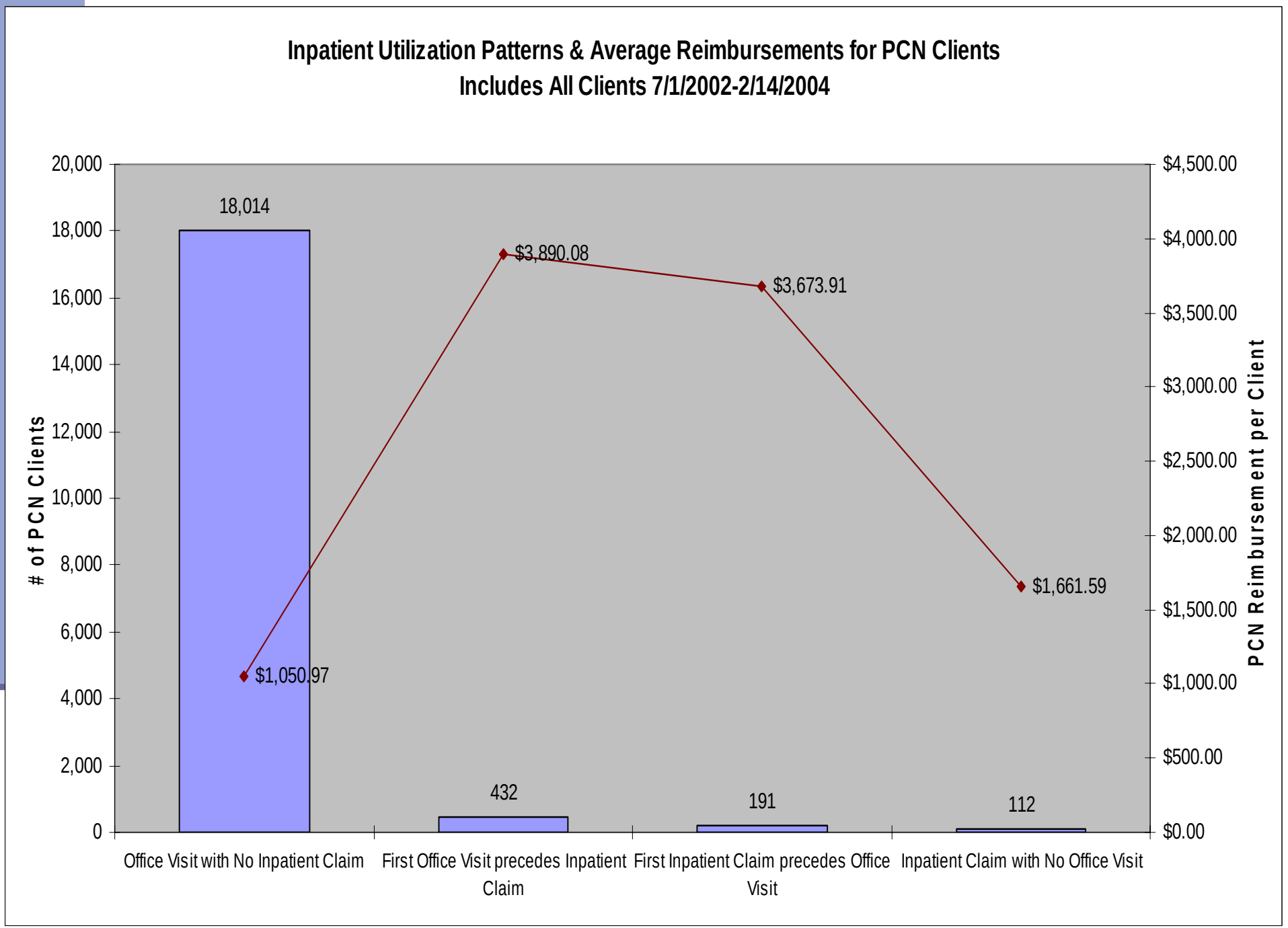
  2,285 have two or more ER visit claims (9%)
- Inpatient Hospitalization

  735 have at least one inpatient claim (288/10,000)

  124 have two or more inpatient claims (49/10,000)

Utilization Patterns

- 2,712 clients had a PCN-covered office visit before using hospital ER or inpatient services (11%)
- 3,031 clients have used hospital services before having a PCN claim for an office visit (12%)
  - Of these, 1,294 have *never* had a PCN claim for an office visit before or after the hospital claim (5%)


Inpatient Utilization Patterns & Average Reimbursements for PCN Clients
Includes All Clients 7/1/2002-2/14/2004
# of PCN Clients
PCN Reimbursement per Client
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
$4,500.00
$4,000.00
$3,500.00
$3,000.00
$2,500.00
$2,000.00
$1,500.00
$1,000.00
$500.00
$0.00
18,014
432
191
112
$1,050.97
$3,890.08
$3,673.91
$1,661.59
Office Visit with No Inpatient Claim
First Office Visit precedes Inpatient Claim
First Inpatient Claim precedes Office Visit
Inpatient Claim with No Office Visit

Average Inpatient Hospital Claim

	First Office Visit Before Inpatient Claim	Inpatient Claim Before First Office Visit	Inpatient Claim, No Office Visit
No ER Claim	$13,327 (N=225)	$15,845 (N=98)	$21,269 (N=75)
Had ER Claim	$17,806 (N=207)	$21,742 (N=93)	$14,318 (N=37)
Total	$15,473 (N=432)	$18,716 (N=191)	$18,972 (N=112)

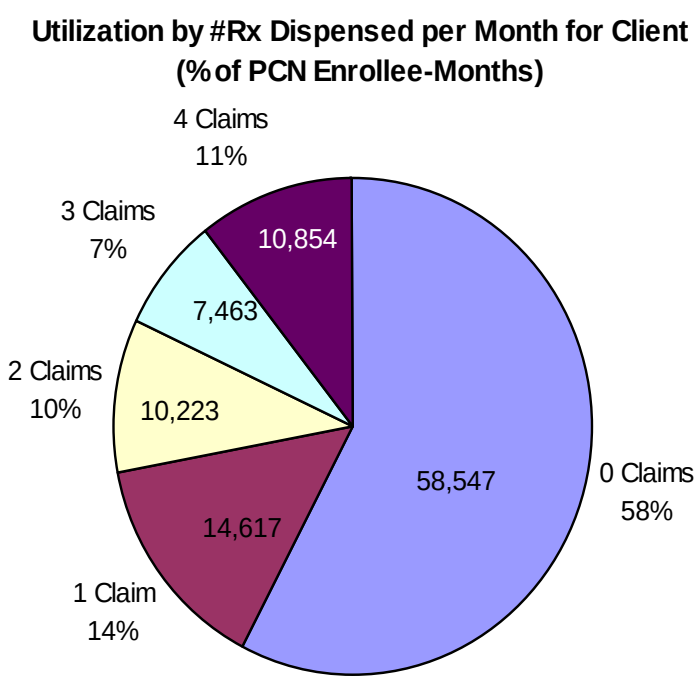
Hospitalization Summary

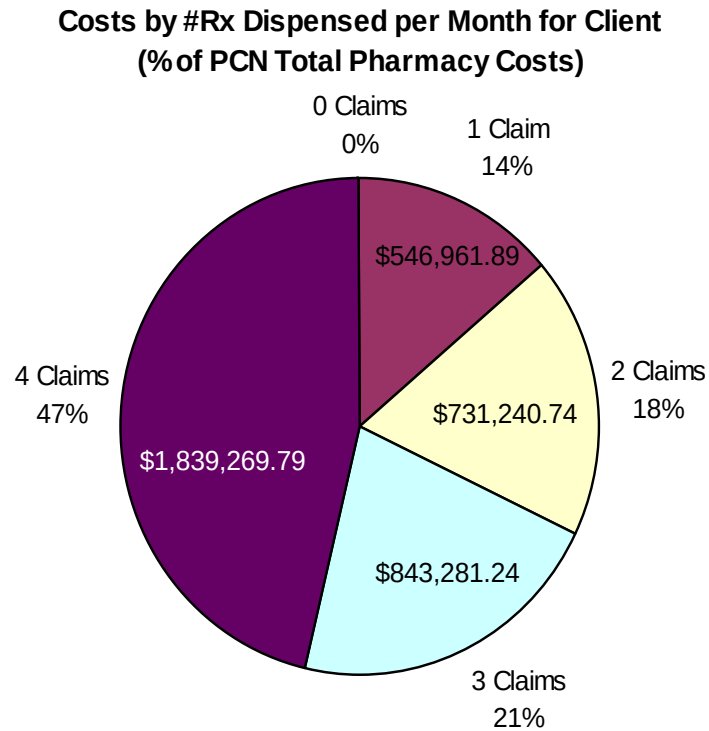
- A substantial number of PCN clients receive treatment in a hospital setting before receiving primary care.
- For those who receive treatment in a hospital setting, the total program cost is slightly higher for those that have received primary care beforehand.

B. Pharmacy Utilization and Costs

8/1/2003 – 12/31/2003

The 11% of PCN clients receiving the maximum pharmacy benefit account for 47% of the pharmacy costs.





High Intensity Users: Clients at Maximum Pharmacy Benefit

Top Ten Therapeutic Classes for PCN Clients Receiving 4+ Prescriptions per Month, 8/03-12/03					
Drug Class	Description	Rank by Cost	Cost	Rank by Volume	Volume
H3A	Analgesics, Narcotics	1	$259,890.84	1	7,182
H2S	Serotonin SPEC Reuptake Inhibitor	2	$150,166.05	2	2,538
H4B	Anticonvulsants	3	$113,731.11	4	1,928
D4K	Gastric and Secretion Reducer	4	$107,301.04	8	1,278
C4G	Insulins	5	$79,204.99	9	1,181
M4A	Diabetic Supplies	6	$78,052.89	13	915
M4E	Lipotropics	7	$61,412.43	11	989
H7T	Antipsychotic, Atypical	8	$50,803.02	36	321
H6H	Skeletal Muscle Relaxants	9	$46,944.31	5	1,670
H2E	Non-Barbiturate, Sedative-Hypnotics	10	$44,108.45	12	930

Many clients filling 4+ prescriptions per month are receiving mental health and pain medications where there is a potential for inappropriate utilization, diversion, and abuse.

Top Twenty Therapeutic Classes for PCN Clients, 8/03-12/03					
Drug Class	Description	Rank by Cost	Cost	Rank by Volume	Volume
H2S	Serotonin SPEC Reuptake Inhibitor	1	$461,589.44	2	8,103
H3A	Analgesics, Narcotics	2	$457,207.34	1	14,287
D4K	Gastric and Secretion Reducer	3	$261,526.63	9	3,108
H4B	Anticonvulsants	4	$257,225.20	3	4,374
C4G	Insulins	5	$137,764.55	12	1,987
G8A	Contraceptives, Oral	6	$129,255.69	6	3,950
M4A	Diabetic Supplies	7	$118,112.19	21	1,383
M4E	**Lipotropics**	8	$112,436.35	15	1,815
H7C	Serotonin-Norepinephrine Reuptake Inhib	9	$106,897.72	23	1,289
S2B	**NSAIDs, Cyclooxygenase Inhib**	10	$97,460.29	5	4,106
H7T	Antipsychotic, Atypical	11	$96,972.20	35	645
H7D	Norepinephrine and Dopamine Reuptake Inhib	12	$93,644.14	25	1,251
H6H	Skeletal Muscle Relaxants	13	$83,977.77	8	3,144
H2E	Non-Barbiturate, Sedative-Hypnotics	14	$81,395.57	17	1,766
A4D	Hypotensives-ACE Blockers	15	$70,130.88	10	2,882
C4L	Hypoglycemics-Biguanide Type	16	$70,043.20	19	1,518
Z2A	**Antihistamines**	17	$68,428.43	13	1,947
W1A	Penicillins	18	$65,564.22	11	2,597
W1Q	Quinolones	19	$54,392.95	34	801
C4N	Hypoglycemics-Insulin Reponse Enhancer	20	$53,037.19	39	555

Some of the most popular overall categories may have lower cost alternatives available.

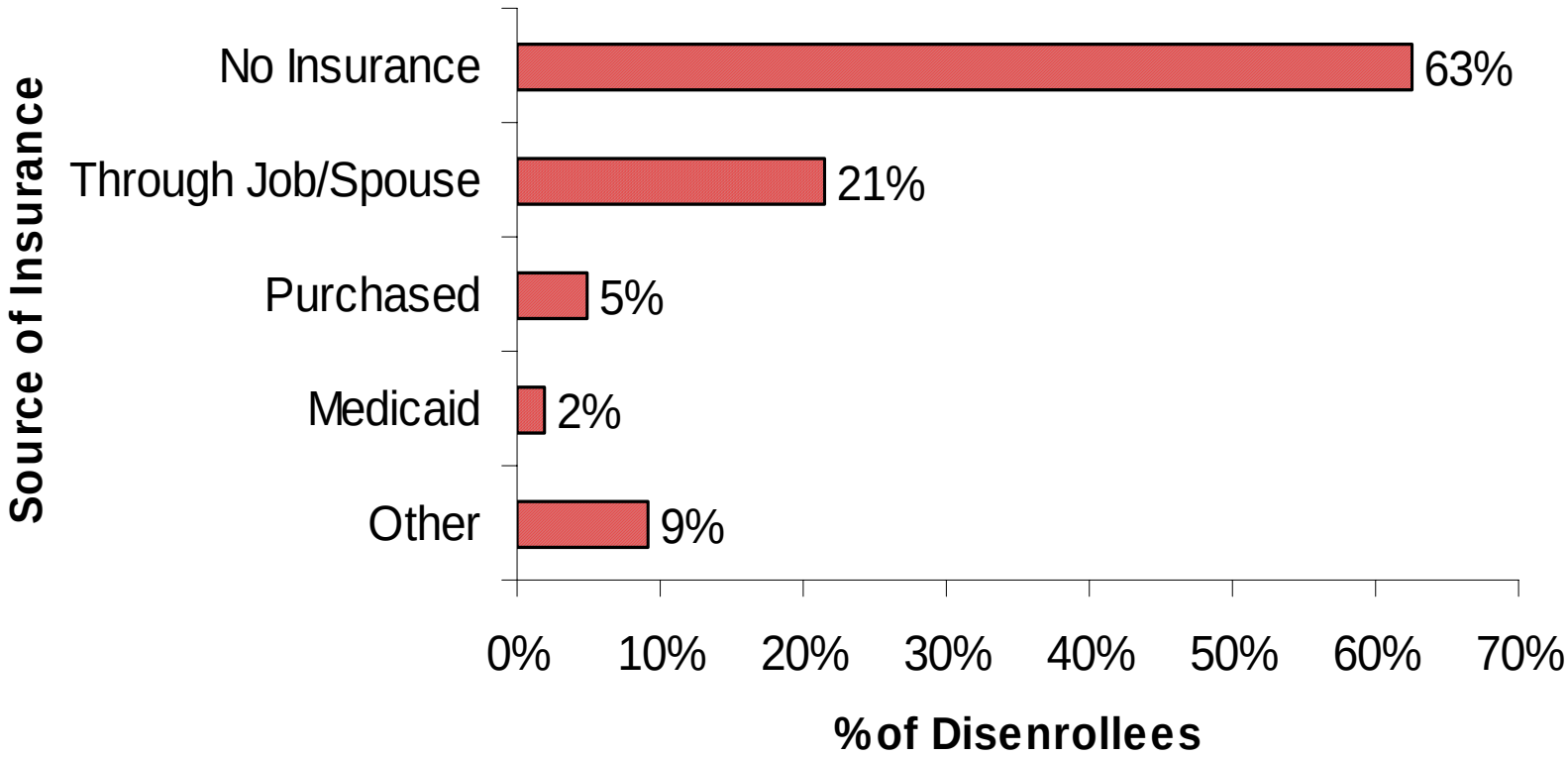
Pharmacy Summary

- High Intensity Users (especially those without children) account for a high fraction of PCN pharmacy costs
- Spending on all types of High Intensity Users involves spending on drugs where there is a potential for abuse or misuse
- Additionally, some of the most costly categories may have lower cost alternatives

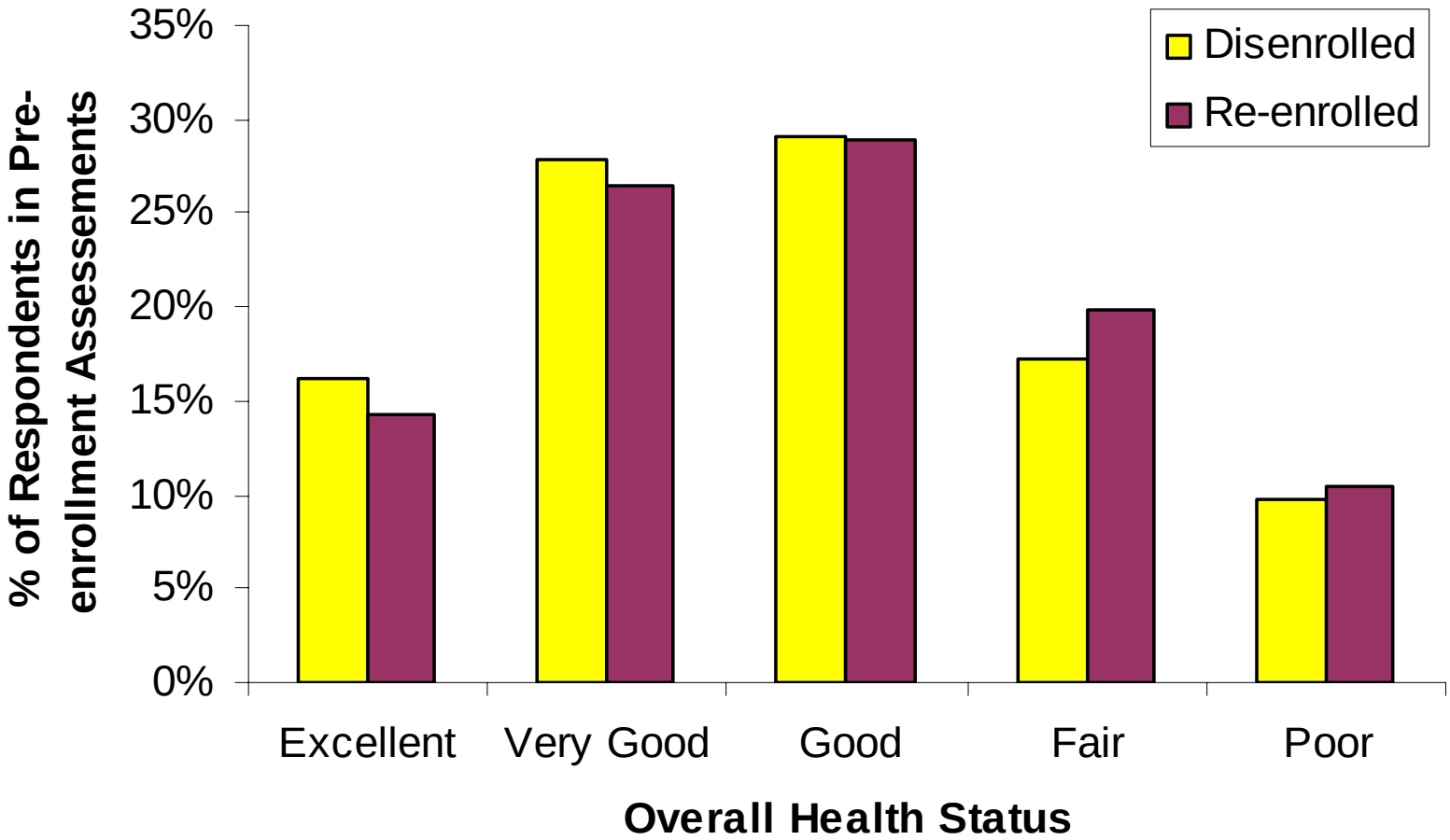
Part III: Disenrollment Survey

- Study population includes all former PCN members who were eligible but did not renew their membership in July or August of 2002 and had a valid address (n=879)
- Mail survey is conducted during Nov.-Dec. 2003.
- Survey instrument includes 43 questions (Reasons for disenrollment, satisfaction with PCN, health care utilization in the past 6 months, and current health status.
- A total of 452 returned surveys are valid for the analysis.

Health Insurance Status of Disenrollees



People who did not renew membership reported better health than those who did renew



Lessons Learned

- The PCN program reached its enrollment target within 17 months, indicating that primary care coverage was valued among the uninsured. With limited financial resources, primary care coverage can serve more uninsured adults than that under an ideal comprehensive coverage.
- The new coverage reduced access barriers to primary care for PCN enrollees; but
- The covered primary care will induce more needs for uncovered acute or specialty care.
- Due to limited coverage, PCN enrollees reported difficulties in getting specialty care or reported problems in getting referrals to specialists.
- Although some communities in Utah established specialty care donation networks, some enrollees' needs were not met.

Lessons Learned (continued)

- Having access to primary care does not guarantee PCN members' appropriate and adequate uses of primary care.
- Program's success will also put the program under more budget pressure, because
  - Healthier members are more likely not to re-enroll.
  - Intensive users are more likely to re-enroll and not satisfy with the limited coverage.

The End

- If an adult (Ages 19-64) population has universal primary care coverage, in the long run, acute care needs for this population will be reduced, and the population's health status will be improved.

- A period of twelve months is not sufficient for demonstrating significant results of the program impact. Future follow-up study is needed.

Acknowledgments

We appreciate the following people in the Utah Department of Health for their comments and assistance:

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For more information about PCN and PCN evaluations go to

www.health.utah.gov/pcn/
http://health.utah.gov/hda/Report/pcn_medicaid.htm